



**SLOVENSKI STANDARD**  
**SIST EN 60335-2-11:2011/A1:2015**  
**01-april-2015**

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**Gospodinjski in podobni električni aparati - Varnost - 2-11. del: Posebne zahteve za bobenske sušilnike - Dopolnilo A1**

Household and similar electrical appliances - Safety - Part 2-11: Particular requirements for tumble dryers

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-11: Besondere Anforderungen für Trommelrockner

Appareils électrodomestiques et analogues - Sécurité - Partie 2-11: Règles particulières pour les sèche-linge à tambour

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**Ta slovenski standard je istoveten z: EN 60335-2-11:2010/A1:2015**

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**ICS:**

13.120	Varnost na domu	Domestic safety
97.060	Aparati za nego perila	Laundry appliances

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EUROPEAN STANDARD

**EN 60335-2-11:2010/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2015

ICS 13.120; 97.060

English Version

**Household and similar electrical appliances - Safety -  
Part 2-11: Particular requirements for tumble dryers  
(IEC 60335-2-11:2008/A1:2012 , modified)**

Appareils électrodomestiques et analogues - Sécurité -  
Partie 2-11: Règles particulières pour les sèche-linge à  
tambour  
(IEC 60335-2-11:2008/A1:2012 , modifiée)

Sicherheit elektrischer Geräte für den Hausgebrauch  
und ähnliche Zwecke -  
Teil 2-11: Besondere Anforderungen für Trommeltrockner  
(IEC 60335-2-11:2008/A1:2012 , modifiziert)

This amendment A1 modifies the European Standard EN 60335-2-11:2010; it was approved by CENELEC on 2014-02-24. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN 60335-2-11:2010/A1:2015) consists of the text of IEC 60335-2-11:2008/A1:2012 prepared by IEC/TC 61 "Safety of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-08-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-02-24

This amendment supplements or modifies the corresponding clauses of EN 60335-1:2012 and its amendments and EN 60335-2-11:2010 and EN 60335-2-11:2010/A1:2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

### Endorsement notice

The text of the International Standard IEC 60335-2-11:2008/A1:2012 was approved by CENELEC as a European Standard with agreed common modifications.

In the Bibliography of EN 60335-2-11:2010, the following note has to be **deleted** for the standard indicated:

ISO 13732-1	NOTE	Harmonized as EN ISO 13732-1
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## COMMON MODIFICATIONS

### 7 Marking and instructions

#### 7.12 *Change text to read:*

*Delete the fifth dashed item from the third paragraph of the addition.*

### 11 Heating

#### 11.8 *Add the following after Table Z101.*

*The exhaust temperature of the air from the drum, measured at the first lint filter after the air passes the clothes load, shall be measured for the purposes of 22.105.*



IEC 60335-2-11

Edition 7.0 2012-10

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



AMENDMENT 1  
AMENDEMENT 1

Household and similar electrical appliances – Safety –  
Part 2-11: Particular requirements for tumble dryers

Appareils électrodomestiques et analogues – Sécurité –  
Partie 2-11: Règles particulières pour les sèche-linge à tambour

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
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## FOREWORD

This amendment has been prepared by committee 61: Safety of household and similar electrical appliances.

The text of this amendment is based on the following documents:

FDIS	Report on voting
61/4434/FDIS	61/4493/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

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It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

### Contents

*Replace the title of Clause 3 by the following:*

Terms and definitions

*Replace the title of Annex CC by the following:*

Equipment protection by type of protection "n"

## FOREWORD

*In Note 2, replace the title of Annex CC by the following:*

Equipment protection by type of protection "n"

## 3 Definitions

*Replace the title of Clause 3 but not the clause number, by the following:*

### Terms and definitions

*Add the following new definition:*

#### 3.103

##### **cool down period**

final part of the **tumble dryer** cycle where the drum is continuously rotated with reduced power to the heating element and with air circulation in order to reduce the possibility of spontaneous combustion of the clothes load

NOTE Continuous rotation does not mean rotation in same direction if the intended operation is to reverse direction in normal use.

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## 7 Marking and instructions

**7.12** *Delete the fifth dashed item from the third paragraph.*

[SIST EN 60335-2-11:2011/A1:2015](https://standards.iteh.ai/catalog/standards/sist/en-60335-2-11-2011-a1-2015)

## 11 Heating

<https://standards.iteh.ai/catalog/standards/sist/en-60335-2-11-2011-a1-2015>

**11.8** *Add the following to the addition:*

*The exhaust temperature of the air from the drum, measured at the first lint filter after the air passes the clothes load, shall be measured for the purposes of 22.105.*

## 19 Abnormal operation

**19.9** *Replace the existing text by the following.*

*Addition:*

*The running overload test is carried out on appliances that have overload protective devices incorporating electronic circuits to protect the windings of the drum motor. However the test is not carried out if the protective device senses the winding temperature directly.*

## 20 Stability and mechanical hazards

**20.101** *Delete the last sentence of the requirement.*

*Add the following new subclause:*

**20.104** For appliances having a door on a vertical surface with an opening exceeding 200 mm and a drum having a volume exceeding 60 dm<sup>3</sup>, it shall not be possible to start the

drum motor after closing the door until a separate means which controls the movement of the drum is operated manually.

NOTE The volume can be calculated from the maximum depth and the maximum inner diameter of the drum.

*Compliance is checked by the following test.*

*The appliance is supplied at **rated voltage**, and the door is opened and then closed.*

*If compliance relies on the operation of an **electronic circuit**, the test is repeated under the following conditions applied separately:*

- *the fault conditions in a) to g) of 19.11.2 are applied one at a time to the **electronic circuit**;*
- *the electromagnetic phenomena tests of 19.11.4.2 and 19.11.4.5 are applied to the appliance.*

*The drum motor shall not start.*

*If the **electronic circuit** is programmable, the software shall contain measures to control the fault/error conditions specified in Table R1 and is evaluated in accordance with the relevant requirements of Annex R.*

## 22 Construction

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22.104 Replace the requirement by the following:

The operation of **protective devices** for the heating circuit shall not disable the **cool down period**, if any.

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*Add the following new subclause:*

**22.105** In order to reduce the risk of spontaneous combustion of the clothes load, the drying cycle shall conclude with a **cool down period** to reduce the temperature of the normal clothes load to a suitable value.

This requirement is not applicable to appliances having a drying cycle air temperature not exceeding 55 °C.

*Compliance is checked by the following test.*

*The appliance is operated under the conditions in Clause 11 and the exhaust temperature of the air from the drum shall be measured at the first lint filter after the air passes the clothes load in the drum.*

*At end of the **cool down period** the air temperature shall not exceed 55 °C.*

## 29 Clearances, creepage distances and solid insulation

29.2 Add the following new paragraph

The requirement for a minimum CTI value of 250 is not applicable to **functional insulation** if the **working voltage** does not exceed 50 V.



## Annexes

Add, before Annex AA, the following new Annex R:

### Annex R (normative)

#### Software evaluation

##### R.2.2.5 Modification:

For programmable **electronic circuits** with functions requiring software incorporating measures to control the fault/error conditions specified in Table R.1 or Table R.2, detection of a fault/error shall occur before compliance with Clause 19 and with 20.104 is impaired.

##### R.2.2.9 Modification:

The software and safety-related hardware under its control shall be initialized and shall terminate before compliance with Clause 19 and with 20.104 is impaired.

#### Annex BB – Tumble dryers that use a refrigerating system incorporating sealed motor-compressors for carrying out the drying process

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#### 2 Normative references (standards.iteh.ai)

Replace the existing reference to IEC 60079-15 by the following:

<https://standards.iteh.ai/catalog/standards/sist/ed13786e-b6f3-46bc-b215-60335-2-11-2011/a1-2015>

IEC 60079-15:2010, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

Add the following new reference:

ISO 7010:2011, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

##### 7.6 Replace the existing text by the following:



Symbol ISO 7010 W021

Warning; Risk of fire / Flammable materials

## 22 Construction

22.205 In the requirement, replace “The insulation” by “For **tumble dryers** that use **flammable refrigerants**, the insulation”

## Annex CC

Replace existing Annex CC by the following.